

Appendix B – Landscape Design Report

CONTEXT AND SITE ANALYSIS

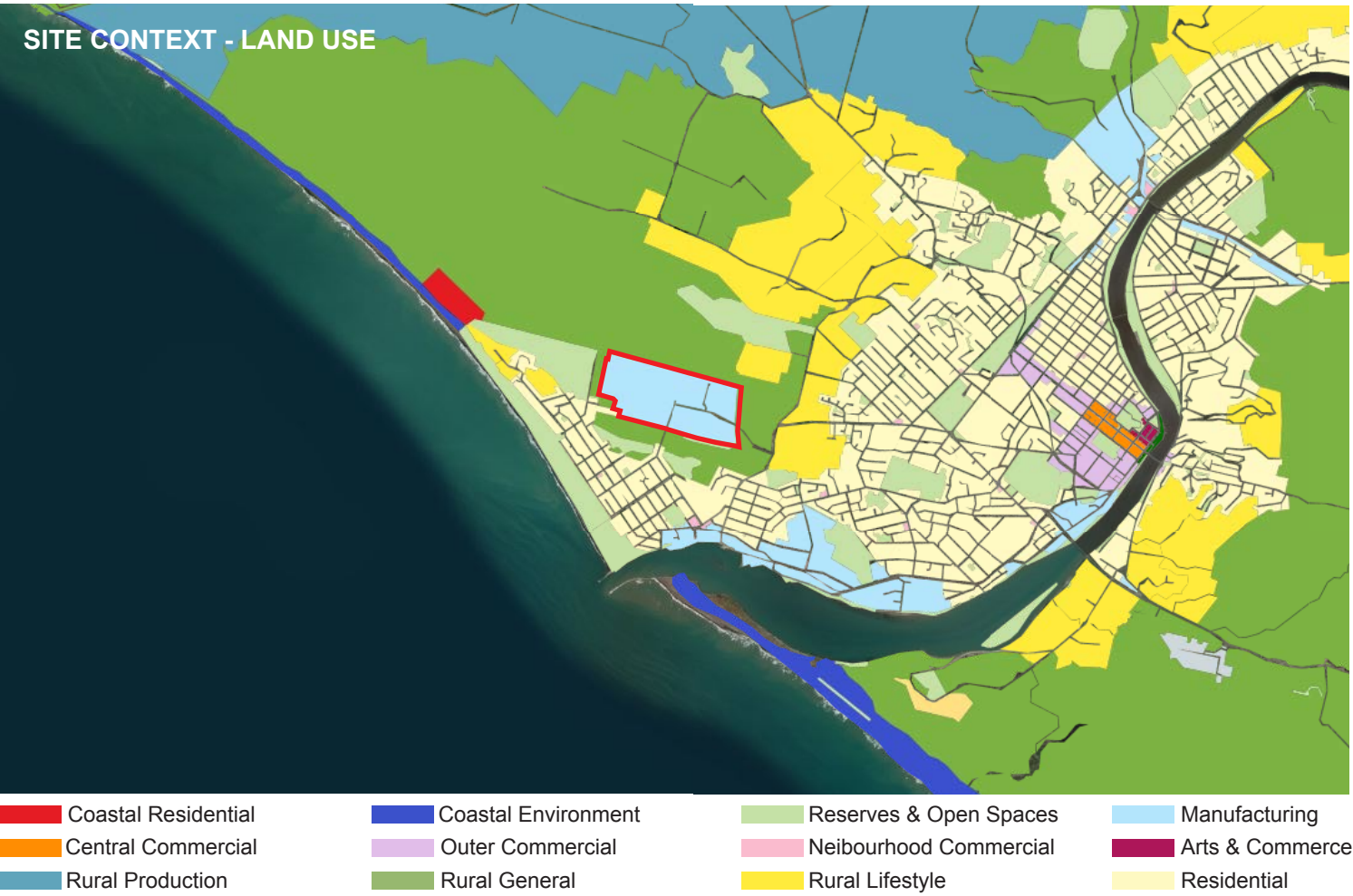
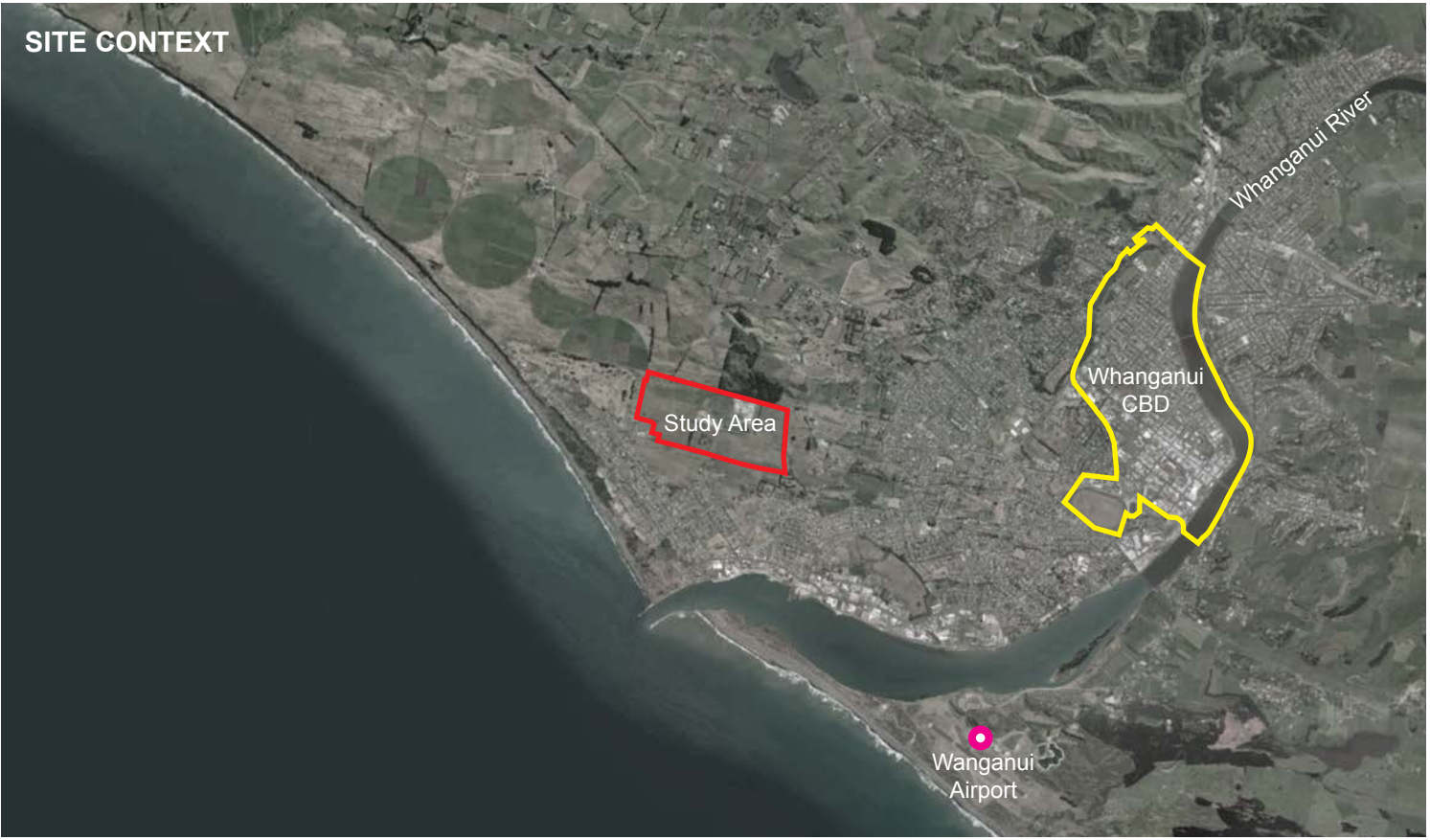
The project site is currently predominantly rural in character with flat to rolling pasture interspersed with scattered stands of trees and shelter belts at paddock boundaries.

The site is largely bordered by existing rural land use of a similar character.

The western boundary of the site is bordered by low density residential lots on Waitai Street with Castlecliff Golf Course on the opposite side of the road beyond.

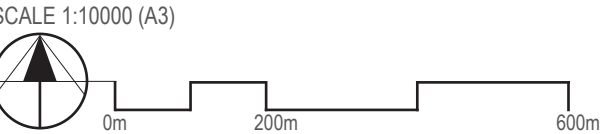
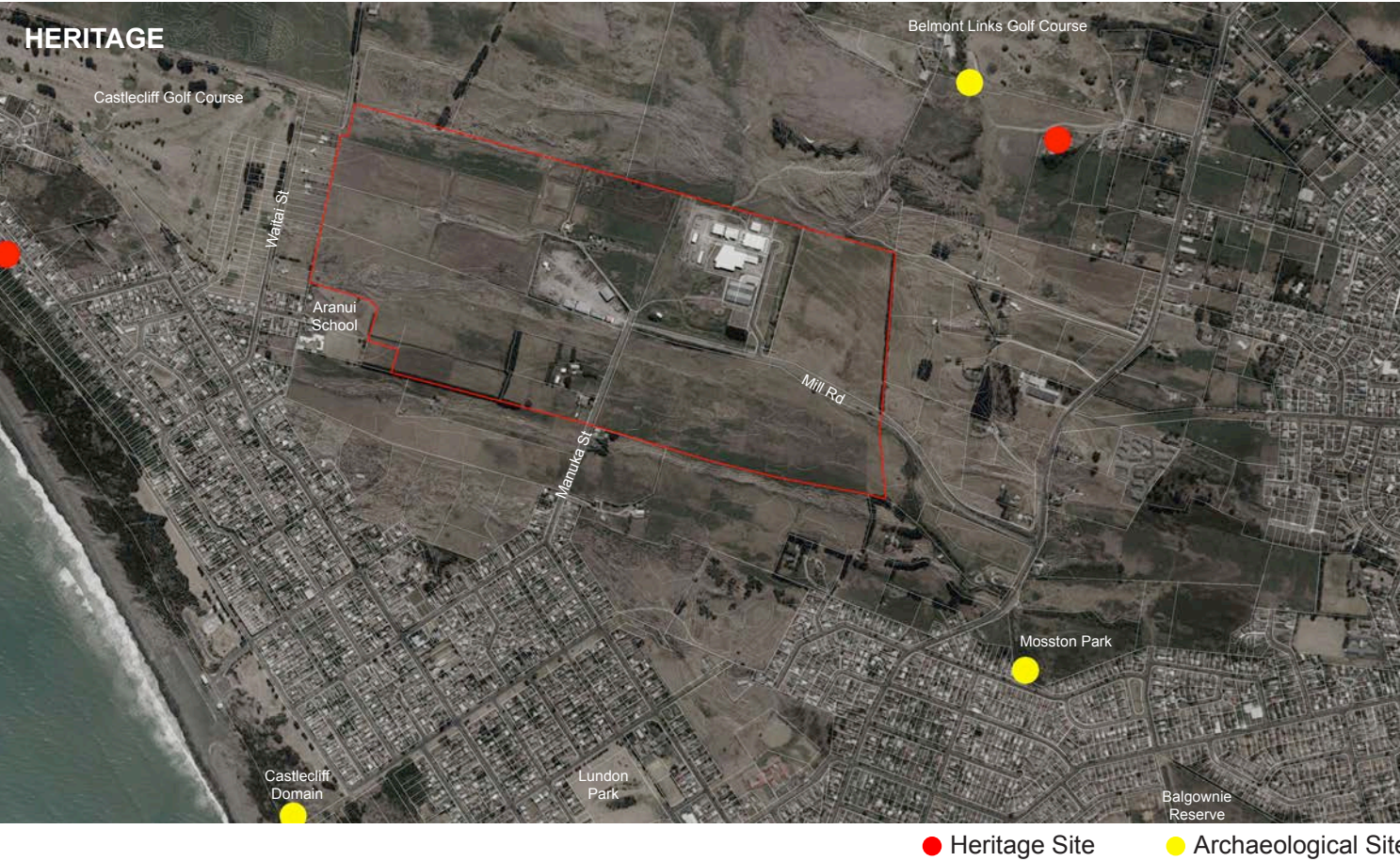
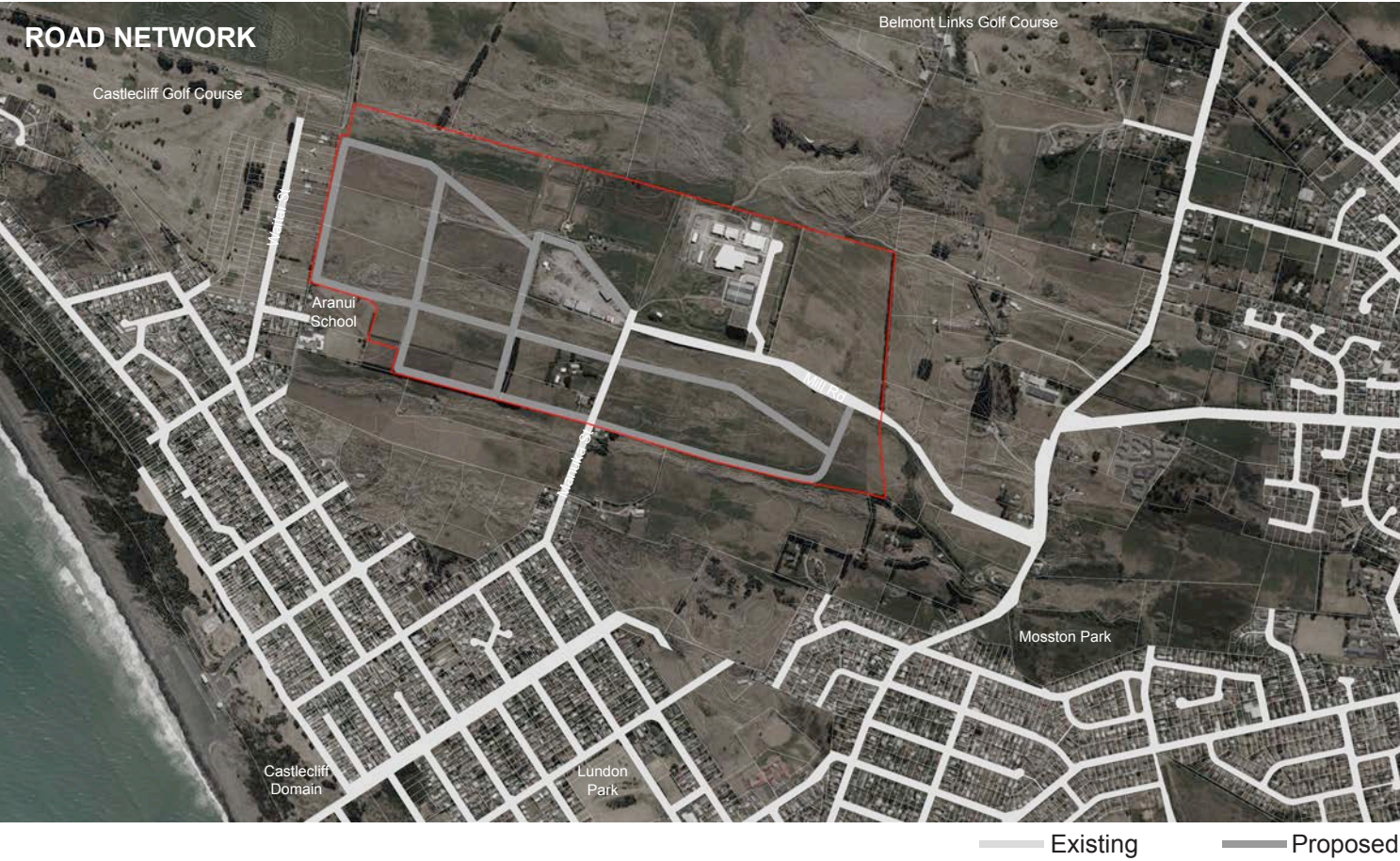
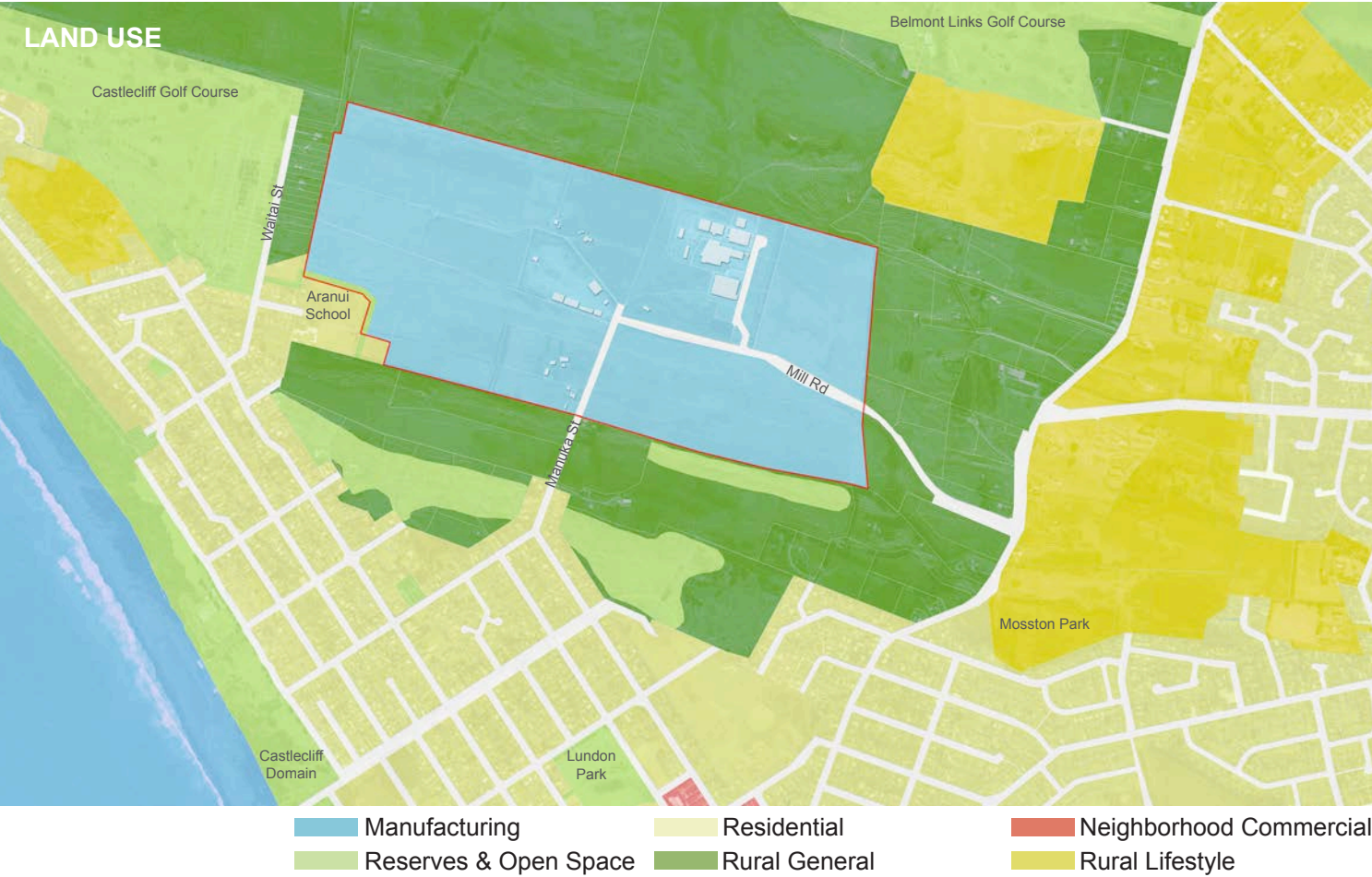
Aranui Primary school is located on the south western edge of the site.

The proposed industrial land use for the site will be somewhat out of character with the existing landscape and surrounding context. As such, it is expected that an appropriate level of threshold treatment will be necessary to mitigate the potentially abrupt change in character, scale, and visual outlook between the project site and its surrounding context. This will be particularly important on the southern and western boundaries where the project site adjoins existing residential areas. The nature of the topography on the northern and eastern boundaries (rising away from the site) is expected to largely mitigate any potential visual effects of development from any northern and eastern visual catchments.

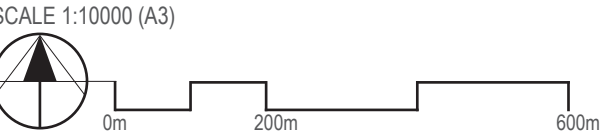
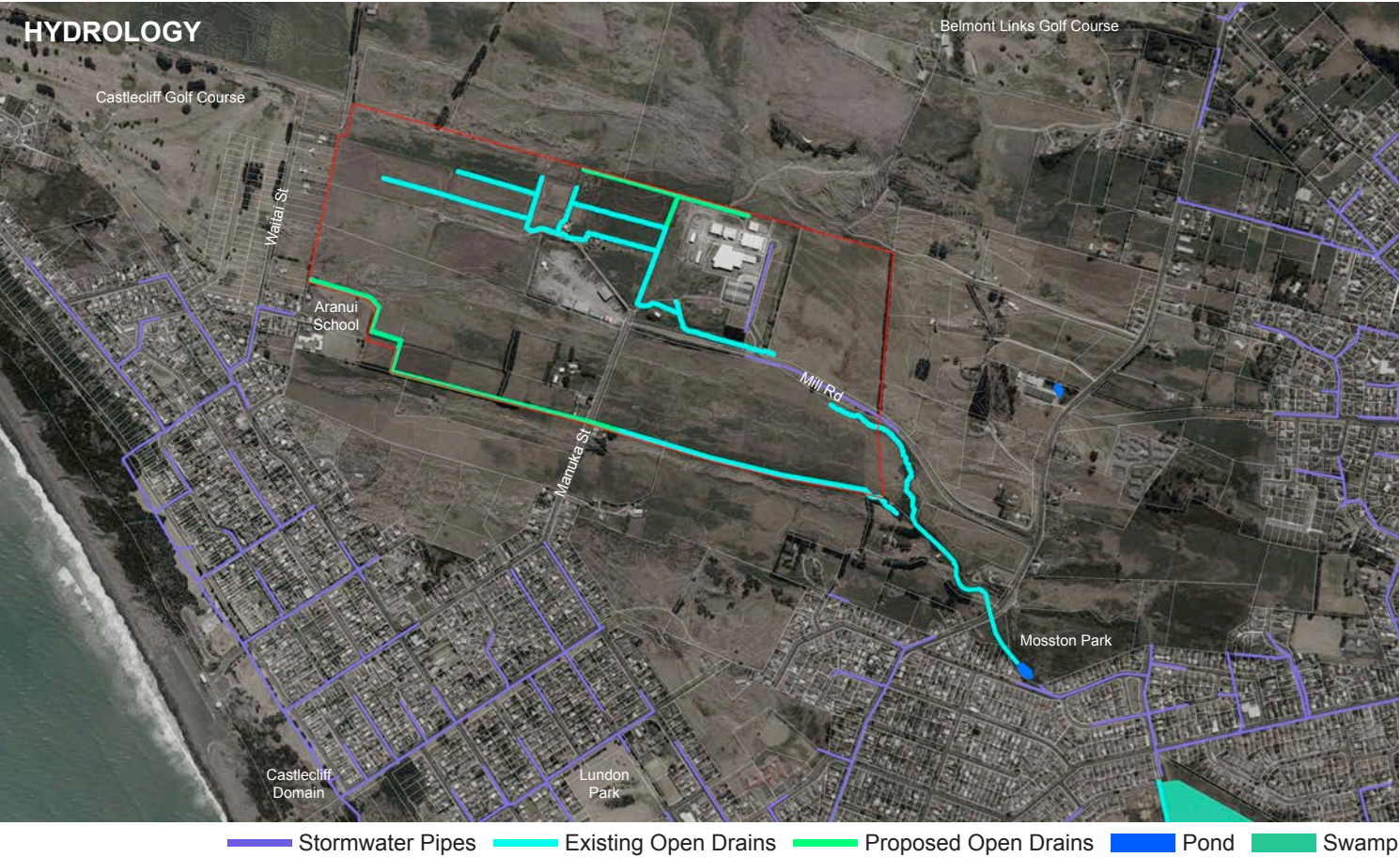
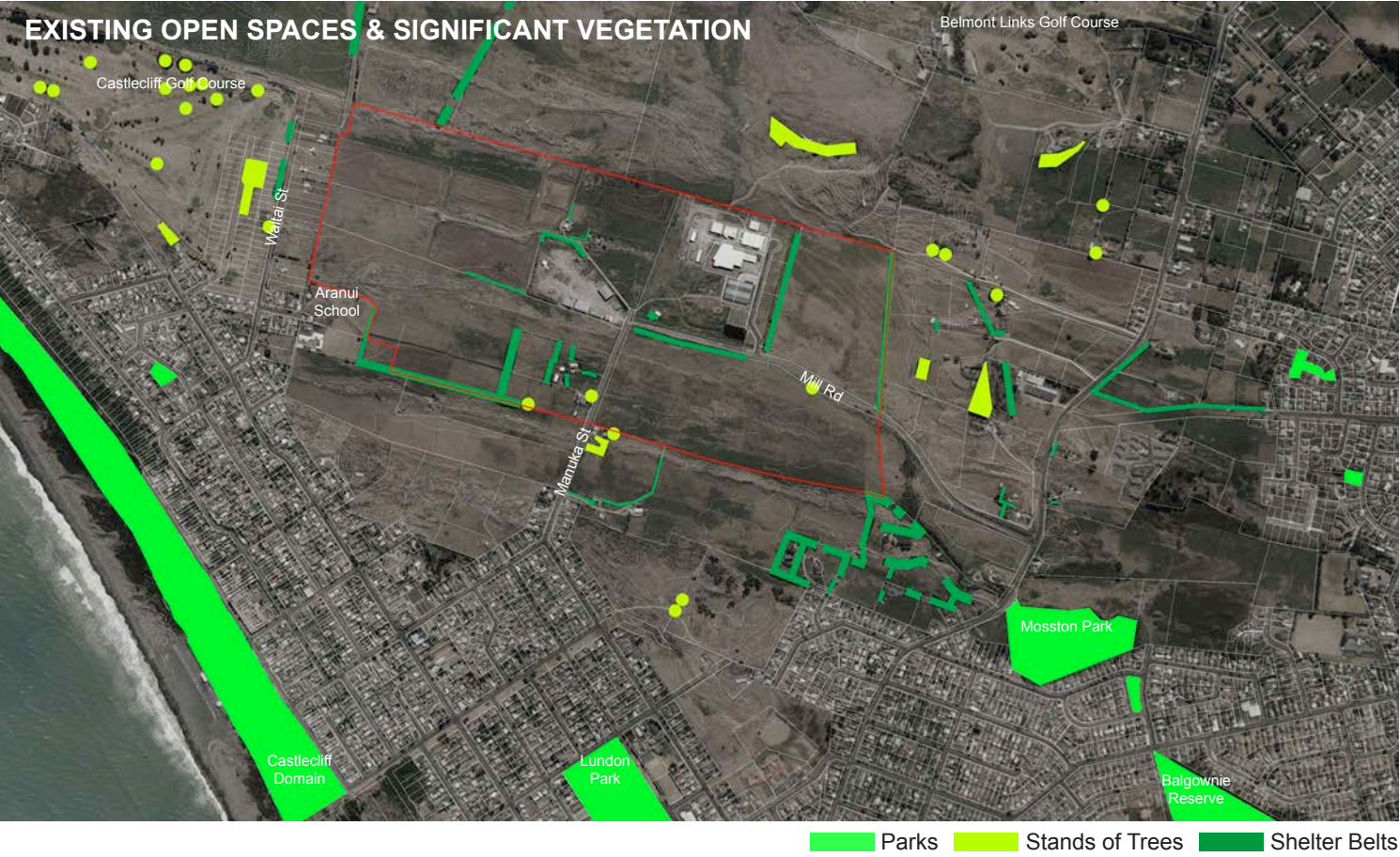


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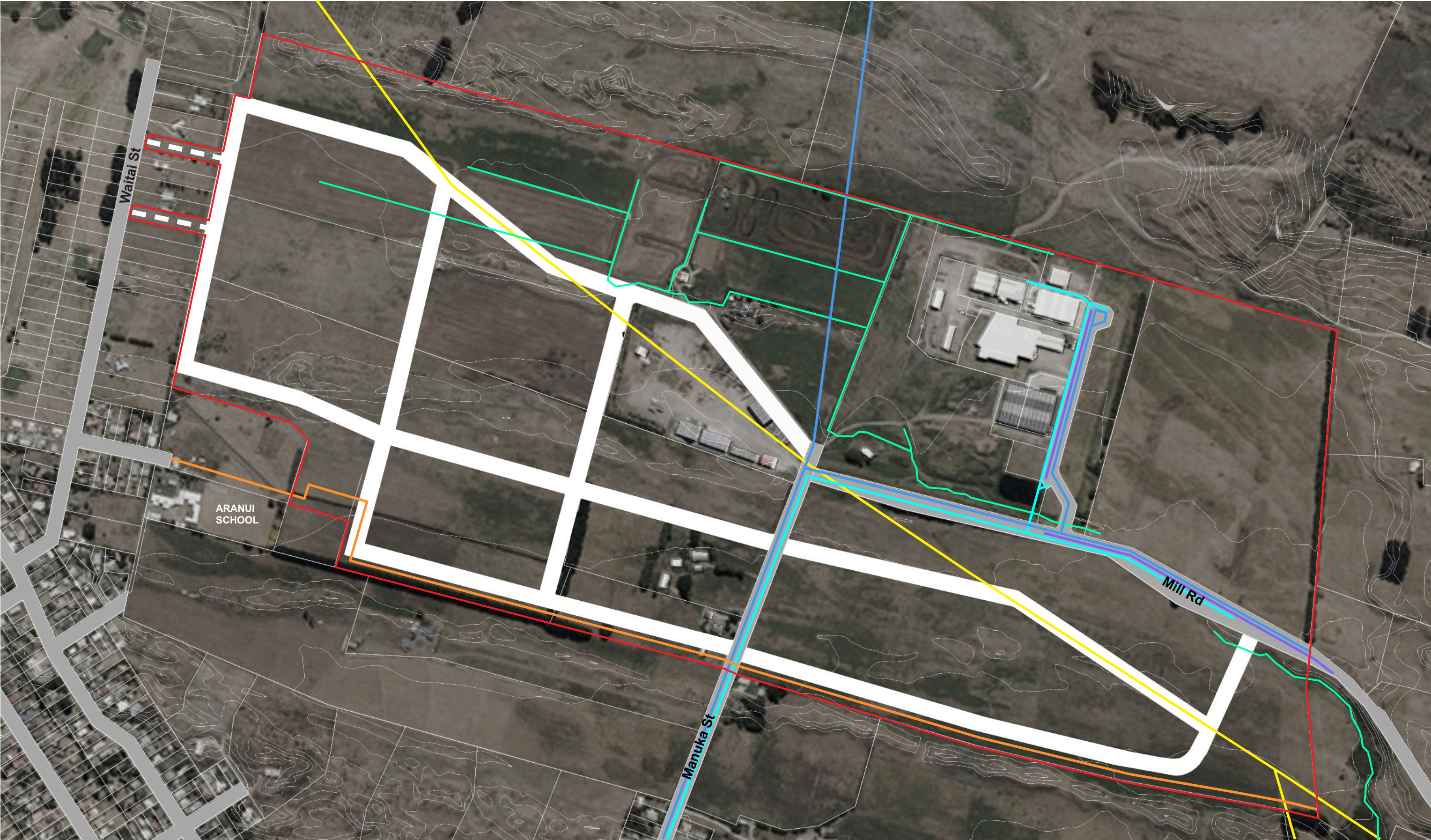
ANALYSIS



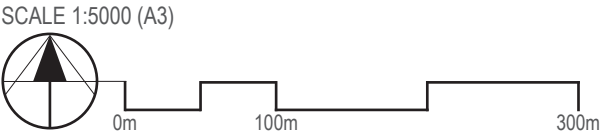
ANALYSIS



SITE CONSTRAINTS



Existing Open Drains Water Pipes Wastewater Pipes Stormwater Pipes High Pressure Gas Line Potential Connection Proposed Roads Proposed Sharedpath



RECOMMENDATIONS

LANDSCAPE BUFFER

Existing shelter belts within, and surrounding, the project site provide an example of an effective landscape element or tool to create a visual buffer between future industrial areas and surrounding residential land use and rural landscapes. Planted shelter belts provide a contextually appropriate mechanism to mitigate the potential visual effects resulting from the expected change in building scale and activity associated with the development of industrial buildings and activities within the site.

Potential landscape buffer treatment is proposed on the southern and western boundaries where the project site adjoins existing residential areas. This buffer area would incorporate a shared walking and cycling path, a planted open drainage channel, visually permeable fencing, and boundary tree planting with lifted canopies to maintain clear sight lines across the site boundary.

Any buffer treatment between the project site and the existing residential areas on the southern and western boundaries should allow for the future redevelopment of these residential areas, in particular allowing for future potential connections to facilitate efficient access and connectivity.

Landscape buffer treatment is not proposed on the northern and eastern boundaries as the topography on these edges of the site (rising away from the site) largely negate the benefit of landscape buffering. Any potential visual effect on these boundaries is expected to be minor and largely mitigated by the nature of the topography.

The interface between the Aranui School grounds and future industrial area would also potentially benefit from landscape buffer treatment to mitigate visual and acoustic effects of future industrial buildings and activities.

CONNECTIVITY

Physical permeability between the proposed industrial area and the surrounding road/street network will provide route options for different travel modes. Opportunities to provide lower cost walking and cycling connections outside of existing and proposed road connections should be explored where appropriate - particularly where these connections will provide good connectivity to and from local residential areas.

Additional walking and cycling connections improve overall safety by providing route options and increased passive surveillance through increased activity and ‘eyes on the street’.

STORMWATER MANAGEMENT AND LANDSCAPE AMENITY

The integration of walkways and low maintenance planting with stormwater conveyance and treatment areas provides a means of enhancing and activating these otherwise utilitarian areas. Stacking functions together in these areas has the effect of increasing accessibility and connectivity, and improving ecological and aesthetic values to create an efficient, high amenity, living green corridor.

CPTED

Crime Prevention Through Environmental Design (CPTED) is a crime prevention philosophy based on proper design and effective use of the built environment leading to a reduction in the incidence and fear of crime, as well as an improvement in quality of life. CPTED reduces criminal opportunity and fosters positive social interaction among legitimate users of space. The emphasis is on prevention rather than apprehension and punishment.

The *National Guidelines for Crime Prevention through Environmental Design in New Zealand* define seven qualities that characterise well designed, safer places:

- 1. Access: Safe movement and connections**
Places with well-defined routes, spaces and entrances that provide for convenient and safe movement without compromising security.
- 2. Surveillance and sightlines: See and be seen**
Places where all publicly accessible spaces are overlooked, and clear sightlines and good lighting provide maximum visibility.
- 3. Layout: Clear and logical orientation**
Places laid out to discourage crime, enhance perception of safety and help orientation and way-finding.
- 4. Activity mix: Eyes on the street**
Places where the level of human activity is appropriate to the location and creates a reduced risk of crime and a sense of safety at all times by promoting a compatible mix of uses and increased use of public spaces.
- 5. Sense of ownership: Showing a space is cared for**
Places that promote a sense of ownership, respect, territorial responsibility and community.

- 6. Quality environments: Well designed, managed and maintained environments**
Places that provide a quality environment and are designed with management and maintenance in mind to discourage crime and promote community safety in the present and the future.

- 7. Physical protection: Using active security measures**
Places that include necessary, well designed security features and elements.

The recommended landscape buffers and stormwater treatment areas should be configured to reduce the likelihood of creating CPTED issues, particularly with regard to maintaining clear sight lines and maximising visibility for street users. Street trees and boundary planting should have canopies maintained to above eye level and visually permeable fencing should be encouraged wherever possible and appropriate.

Stormwater conveyance channels are recognised as being particularly problematic from a CPTED perspective - particularly where this infrastructure is located between private land uses with little to no physical access or passive surveillance. Integrating this infrastructure into the edge of the street corridor results in these areas benefiting from the increased activity and passive surveillance provided by pedestrians and drivers using the street.

Providing choices for route options also improves personal safety by reducing predictable movement patterns.

STREET TREE PLANTING

The *Whanganui District Council Street Tree Strategy 2016* outlines the following Vision and principles with regard to street tree planting:

Vision statement
Whanganui is renowned nationally for its treescape which enhances our vibrant, cultural living environment.

- Principles**
The following key principles underpin the Street Tree Strategy:
- The Council wishes to emphasize the value of its street trees, and the importance placed on the role of the Council as the guardian of this tree stock.*
 - In its decision making Council places a high value on the benefits of trees to the community as a whole rather than costs/benefits to private individuals.*
 - The Council strives to maintain the integrity of Whanganui’s treescape for future generations while allowing flexibility for necessary tree removal and replacement.*

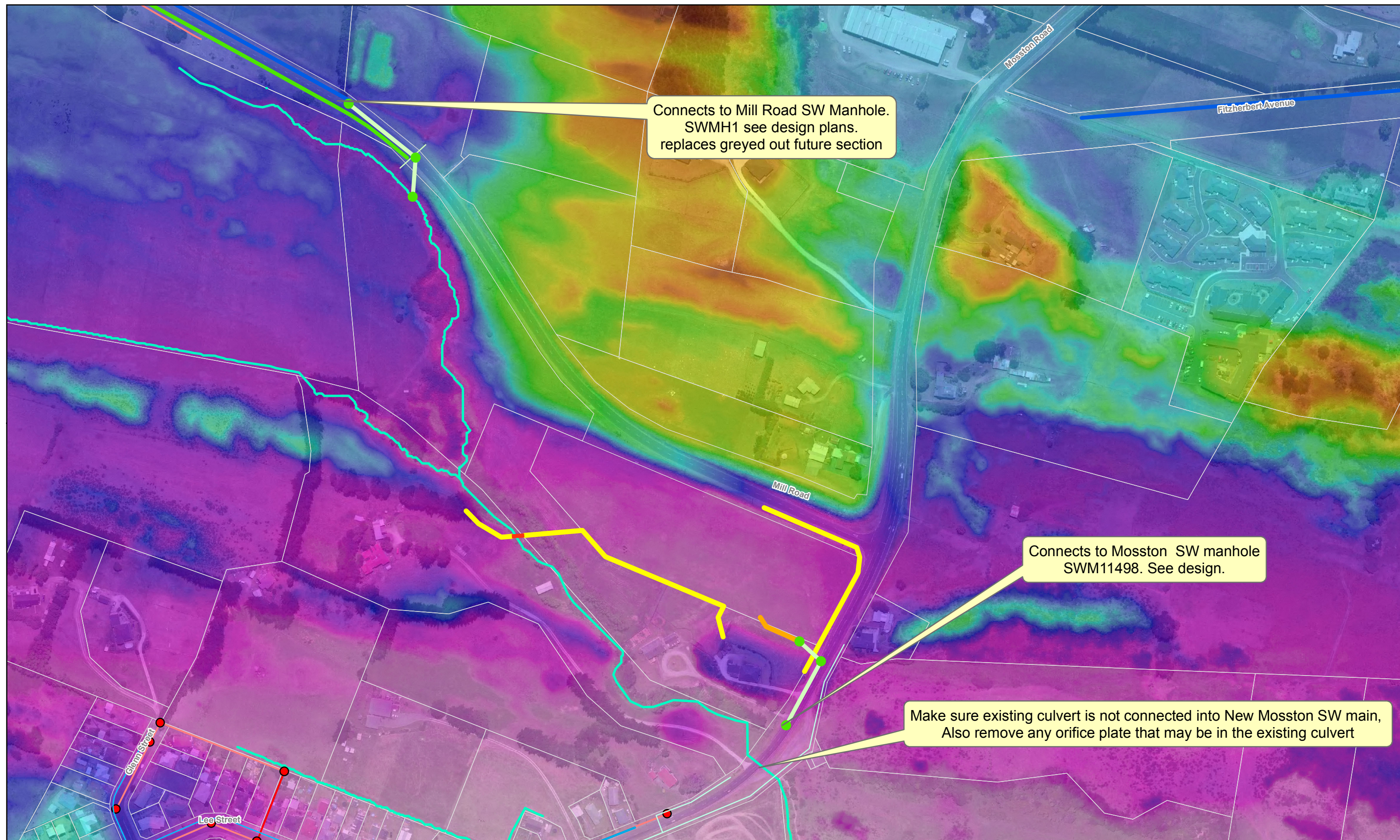
Section 2.0 of the strategy further identifies that:

- 2.1 There is a need to ensure the opportunity for integrated street plantings are sufficiently considered during subdivision or street upgrades. Poorly considered or late consideration of trees during developments can lead to insufficient space for plantings, root severance during works or loss of street trees with no replanting’s.*
- 2.2 In relation to street design and tree planting, the New Zealand Standard (NZS 4404) and companion document have relevant standards, which need to be adhered to as a minimum requirement. The standards include minimum separation distances and site distances for tree planting from intersections, light standards, driveways bus stops and other inbuilt infrastructure.*

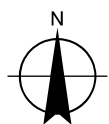
Of particular relevance, the strategy sets the following objectives with regard to the goal of integrating trees into the future development of the urban landscape.

- 3.1 Ensure trees are seen as essential assets by requiring trees to be considered and provided for in future urban development.*
- 3.2 Require developers undertaking new subdivisions to engage with Council Parks Department in the planning stages to ensure street trees are included in the design.*
- 3.3 Develop an Urban Streetscape Plan which provides guidance on future tree planting.*
- 3.4 Engage with developers and property owners to increase awareness of the values and benefits of trees in developments.*
- 3.5 Consider alternative design options for street tree planting.*

It is recommended that a street tree framework plan is developed for the site as a key component of the next stage of public realm/street planning and design. This high level plan would identify an overarching structure for street tree planting throughout the site and provide guidance on suitable species and locations within the road corridor.



Paper Size A3



LEGEND

- Existing Open Drains
- SW Manholes
- SW Pipes
- Bund - Mill Pond Opt 1
- Overflow Weir
- Mill Road Storage Drain



**WHANGANUI
DISTRICT COUNCIL**
Te Kaunihera a Rohe o Whanganui

Whanganui District Council
Mill - Mosston SW:
Option 1

| | |
|------------|-------------|
| Job Number | 51-33357 |
| Revision | 0 |
| Date | 21 Mar 2019 |

Figure 1

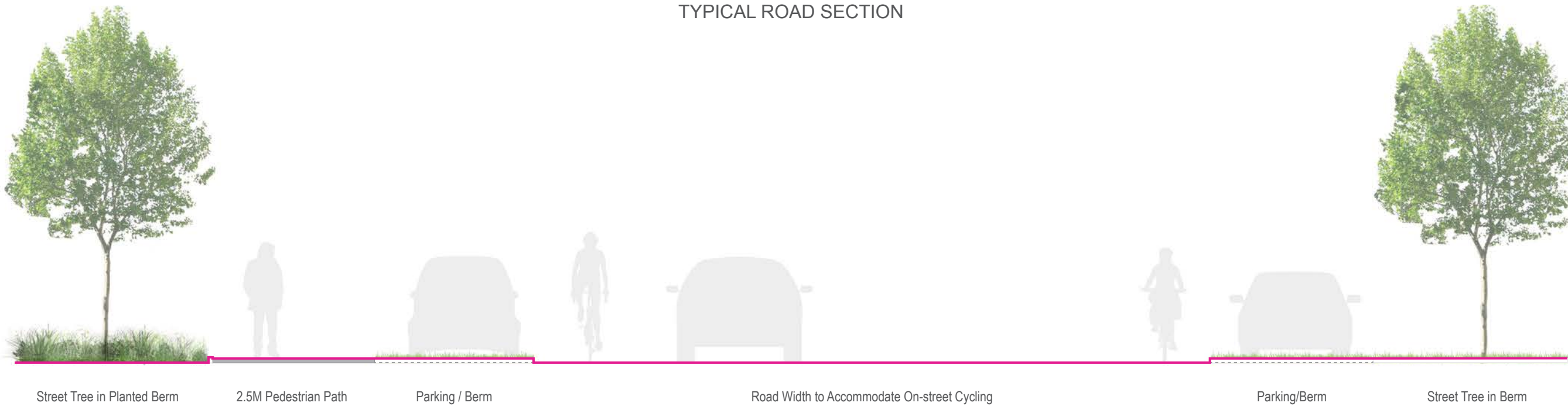
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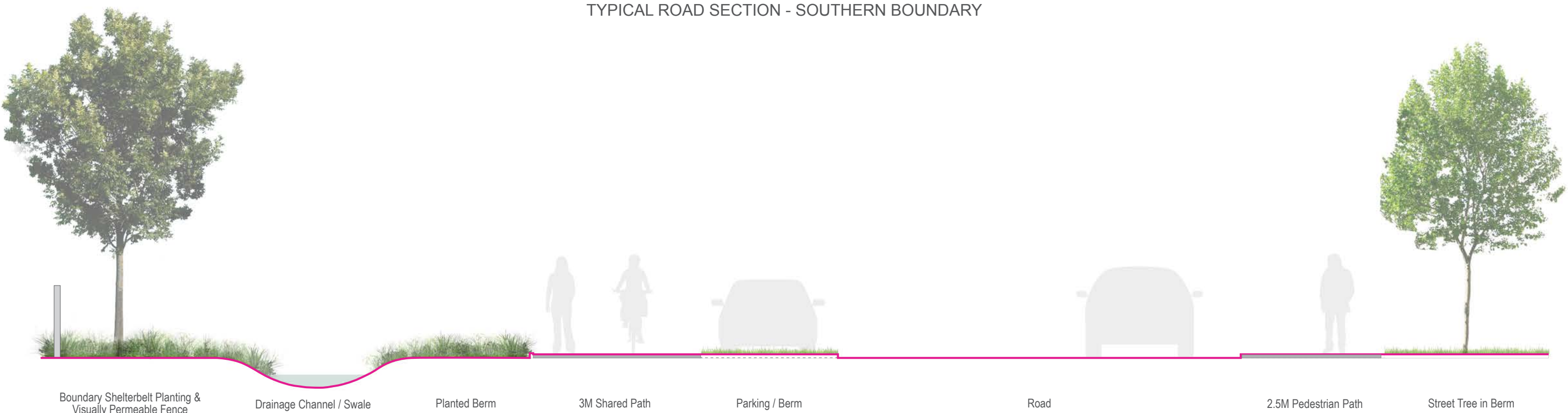
Data source: GHD: catchment, staging (2016); WDC: wastewater assets. Created by: CJAnderson

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TYPICAL ROAD SECTION



TYPICAL ROAD SECTION - SOUTHERN BOUNDARY



DRAFT